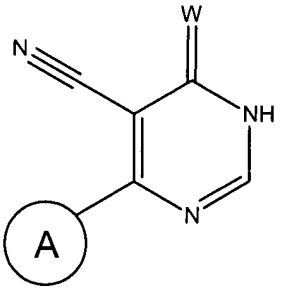
AMENDMENTS TO THE CLAIMS

The following **Listing of Claims** will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A compound of formula **I**:



I

or a pharmaceutically acceptable salt thereof, wherein:

W is oxygen or sulfur;

ring A is a 5-6 membered aryl, heterocyclyl or heteroaryl ring having 0-4 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

wherein ring A is optionally substituted with 1-4 groups independently selected from halo, $-R^1$, ~~$-OR^1$~~, $-SR^1$, $-NO_2$, -CN, $-N(R^1)_2$, $-NR^1C(O)R^1$, $-NR^1C(O)N(R^1)_2$, $-NR^1CO_2R^1$, $-NR^1NR^1C(O)R^1$, $-NR^1NR^1C(O)N(R^1)_2$, $-NR^1NR^1CO_2R^1$, $-C(O)C(O)R^1$, $-C(O)CH_2C(O)R^1$, $-CO_2R^1$, $-C(O)R^1$, $-C(O)N(R^1)_2$, $-OC(O)N(R^1)_2$, $-S(O)_2R^1$, $-SO_2N(R^1)_2$, $-S(O)R^1$, $-NR^1SO_2R^1$, $-NR^1SO_2N(R^1)_2$, $-C(=S)N(R^1)_2$, $-C(=NH)-N(R^1)_2$, =O, =S, $=NNHR^1$, $=NN(R^1)_2$, $=NNHC(O)R^1$, $=NNHCO_2(R^1)$, $=NNHSO_2(R^1)$, or $=NR^1$, wherein two independent occurrences of R^1, on the same substituent or different substituents, optionally taken together with the atom or atoms to which each R^1 group is bound, form a 3-8 membered cycloalkyl, heterocyclyl, aryl, or heteroaryl ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

each R^1 is independently selected from hydrogen, aliphatic, aryl, heteroaryl or heterocyclyl, wherein each member of R^1 except hydrogen is optionally substituted with halo, $-R^2$, $-OR^2$, $-SR^2$, $-NO_2$, -CN, $-N(R^2)_2$, $-NR^2C(O)R^2$, $-NR^2C(O)N(R^2)_2$, $-NR^2CO_2R^2$, $-NR^2NR^2C(O)R^2$, $-NR^2NR^2C(O)N(R^2)_2$, $-NR^2NR^2CO_2R^2$, $-C(O)C(O)R^2$, $-C(O)CH_2C(O)R^2$,

$-CO_2R^2$, $-C(O)R^2$, $-C(O)N(R^2)_2$, $-OC(O)N(R^2)_2$, $-S(O)_2R^2$, $-SO_2N(R^2)_2$, $-S(O)R^2$, $-NR^2SO_2R^2$, $-NR^2SO_2N(R^2)_2$, $-C(=S)N(R^2)_2$, $-C(=NH)-N(R^2)_2$, =O, =S, $=NNHR^2$, $=NN(R^2)_2$, $=NNHC(O)R^2$, $=NNHCO_2(R^2)$, $=NNHSO_2(R^2)$, or $=NR^2$, wherein two independent occurrences of R^2, on the same substituent or different substituents, optionally taken together with the atom or atoms to which each R^2 group is bound, form a 3-8-membered cycloalkyl, heterocyclyl, aryl, or heteroaryl ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

each R^2 is independently selected from hydrogen, aliphatic, aryl, heteroaryl or heterocyclyl, wherein each member of $\underline{R^2}$ ~~R~~ except hydrogen is optionally substituted with halo, $-R^3$, $-OR^3$, $-SR^3$, $-NO_2$, -CN, $-N(R^3)_2$, $-NR^3C(O)R^3$, $-NR^3C(O)N(R^3)_2$, $-NR^3CO_2R^3$, $-NR^3NR^3C(O)R^3$, $-NR^3NR^3C(O)N(R^3)_2$, $-NR^3NR^3CO_2R^3$, $-C(O)C(O)R^3$, $-C(O)CH_2C(O)R^3$, $-CO_2R^3$, $-C(O)R^3$, $-C(O)N(R^3)_2$, $-OC(O)N(R^3)_2$, $-S(O)_2R^3$, $-SO_2N(R^3)_2$, $-S(O)R^3$, $-NR^3SO_2R^3$, $-NR^3SO_2N(R^3)_2$, $-C(=S)N(R^3)_2$, $-C(=NH)-N(R^3)_2$, =O, =S, $=NNHR^3$, $=NN(R^3)_2$, $=NNHC(O)R^3$, $=NNHCO_2(R^3)$, $=NNHSO_2(R^3)$, or $=NR^3$; and

each R^3 is independently hydrogen or unsubstituted aliphatic;

provided that when ring A is phenyl, it must be substituted.

2. (Original) The compound of claim 1, wherein W is oxygen.

3. (Original) The compound of claim 1, wherein W is sulfur.

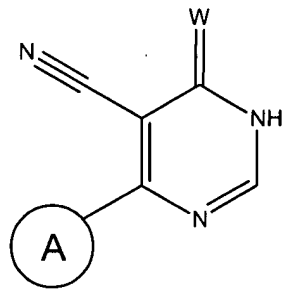
4. (Currently amended) The compound of claim 2 or 3, ring A is phenyl substituted with 1-4 groups independently selected from halo, $-R^1$, ~~$-OR^1$~~, $-SR^1$, $-NO_2$, -CN, $-N(R^1)_2$, $-NR^1C(O)R^1$, $-NR^1C(O)N(R^1)_2$, $-NR^1CO_2R^1$, $-NR^1NR^1C(O)R^1$, $-NR^1NR^1C(O)N(R^1)_2$, $-NR^1NR^1CO_2R^1$, $-C(O)C(O)R^1$, $-C(O)CH_2C(O)R^1$, $-CO_2R^1$, $-C(O)R^1$, $-C(O)N(R^1)_2$, $-OC(O)N(R^1)_2$, $-S(O)_2R^1$, $-SO_2N(R^1)_2$, $-S(O)R^1$, $-NR^1SO_2R^1$, $-NR^1SO_2N(R^1)_2$, $-C(=S)N(R^1)_2$, or $-C(=NH)-N(R^1)_2$, wherein two independent occurrences of R^1, on the same substituent or different substituents, optionally taken together with the atom or atoms to which each R^1 group is bound, form a 5-7-membered cycloalkyl, heterocyclyl, aryl, or heteroaryl ring having 0-2 heteroatoms independently selected from N, O or S.

5. (Currently amended) The compound of claim 4, wherein ring A is phenyl substituted with 1-4 groups independently selected from halo, $-R^1$, ~~$-OR^1$~~, $-SR^1$, $-NO_2$, -CN, $-N(R^1)_2$, $-NR^1C(O)R^1$, $-CO_2R^1$, $-C(O)R^1$, $-C(O)N(R^1)_2$, $-S(O)_2R^1$, $-SO_2N(R^1)_2$, $-NR^1SO_2R^1$, or

$-C(=S)N(R^1)_2$, wherein two independent occurrences of R^1, on the same substituent or different substituents, optionally taken together with the atom or atoms to which each R^1 group is bound, form a 5-7-membered heterocyclyl, aryl, or heteroaryl ring having 0-2 heteroatoms independently selected from N, O or S.

6. (Currently amended) The compound of claim 21 ~~or 3~~, wherein ring A is a 5-6 membered heterocyclyl or heteroaryl ring having 1-2 heteroatoms independently selected from N, O or S, wherein ring A is optionally substituted with 1-4 groups independently selected from halo, $-R^1$, $-OR^1$, $-SR^1$, $-NO_2$, -CN, $-N(R^1)_2$, $-NR^1C(O)R^1$, $-CO_2R^1$, $-C(O)R^1$, $-C(O)N(R^1)_2$, $-S(O)_2R^1$, $-SO_2N(R^1)_2$, $-NR^1SO_2R^1$, or $-C(=S)N(R^1)_2$, wherein two independent occurrences of R^1, on the same substituent or different substituents, optionally taken together with the atom or atoms to which each R^1 group is bound, form a 5-7-membered cycloalkyl, heterocyclyl, aryl, or heteroaryl ring having 0-2 heteroatoms independently selected from N, O or S.

7. (Currently amended) ~~The compound of claim 5,~~ A compound of formula **I**:



I

or a pharmaceutically acceptable salt thereof, wherein:

W is oxygen or sulfur;

ring A is naphthyl, benzodioxolyl, dihydrobenzodioxinyl, benzothiazolyl, benzoimidazolyl, or dihydrobenzo[b][1,4]dioxepinyl, wherein each member of ring A is optionally substituted with halo, $-R^2$, $-OR^2$, $-SR^2$, $-NO_2$, -CN, $-N(R^2)_2$, $-NR^2C(O)R^2$, $-CO_2R^2$, $-C(O)R^2$, $-C(O)N(R^2)_2$, $-S(O)_2R^2$, $-SO_2N(R^2)_2$, $-NR^2SO_2R^2$, or $-C(=S)N(R^2)_2$;

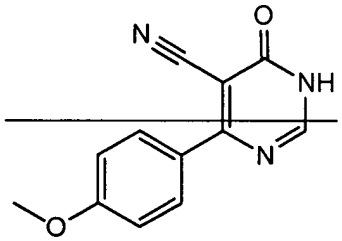
each R^2 is independently selected from hydrogen, aliphatic, aryl, heteroaryl or heterocyclyl, wherein each member of R^2 except hydrogen is optionally substituted with halo, $-R^3$, $-OR^3$, $-SR^3$, $-NO_2$, -CN, $-N(R^3)_2$, $-NR^3C(O)R^3$, $-NR^3C(O)N(R^3)_2$, $-NR^3CO_2R^3$, $-NR^3NR^3C(O)R^3$, $-NR^3NR^3C(O)N(R^3)_2$, $-NR^3NR^3CO_2R^3$, $-C(O)C(O)R^3$, $-C(O)CH_2C(O)R^3$,

$-CO_2R^3$, $-C(O)R^3$, $-C(O)N(R^3)_2$, $-OC(O)N(R^3)_2$, $-S(O)_2R^3$, $-SO_2N(R^3)_2$, $-S(O)R^3$, $-NR^3SO_2R^3$, $-NR^3SO_2N(R^3)_2$, $-C(=S)N(R^3)_2$, $-C(=NH)-N(R^3)_2$, =O, =S, $=NNHR^3$, $=NN(R^3)_2$, $=NNHC(O)R^3$, $=NNHCO_2(R^3)$, $=NNHSO_2(R^3)$, or $=NR^3$; and

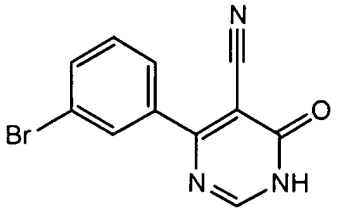
each R^3 is independently hydrogen or unsubstituted aliphatic.

8. (Currently amended) The compound of claim ~~6~~ 21, wherein ring A is pyridinonyl, tetrahydro-quinolinyl, pyridyl, or thiazolyl, wherein each member of ring A is optionally substituted with halo, $-R^2$, $-OR^2$, $-SR^2$, $-NO_2$, -CN, $-N(R^2)_2$, $-NR^2C(O)R^2$, $-CO_2R^2$, $-C(O)R^2$, $-C(O)N(R^2)_2$, $-S(O)_2R^2$, $-SO_2N(R^2)_2$, $-NR^2SO_2R^2$, or $-C(=S)N(R^2)_2$.

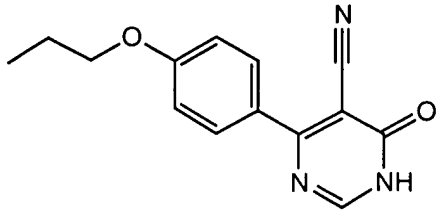
9. (Currently amended) ~~The compound of claim 1,~~ A compound selected from:



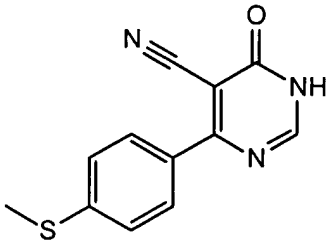
~~I-2~~



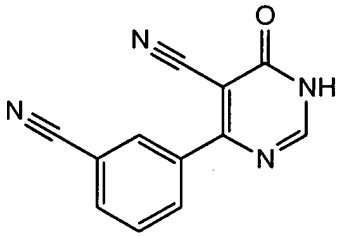
I-3



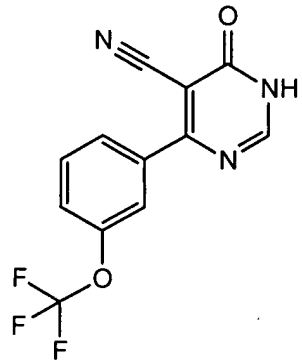
I-4



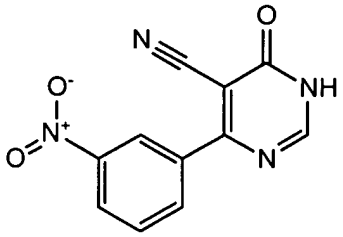
I-5



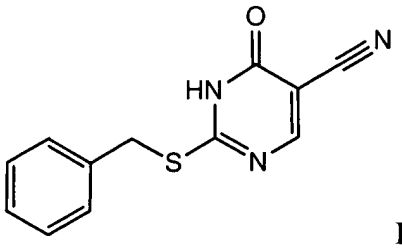
I-6



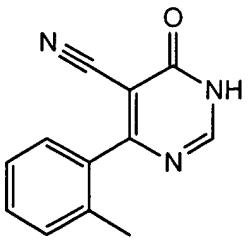
I-7



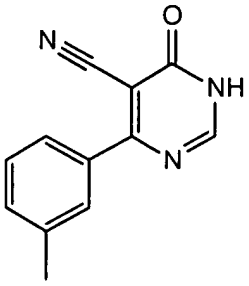
I-8



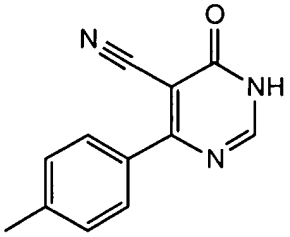
I-9



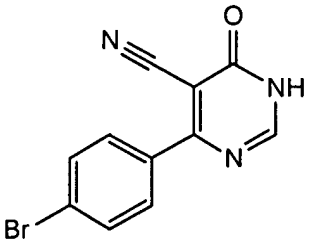
I-10



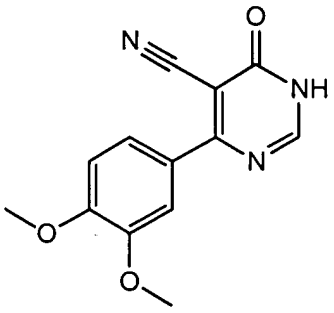
I-11



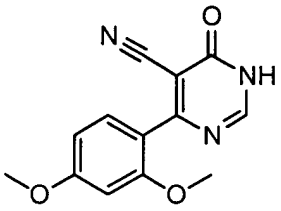
I-12



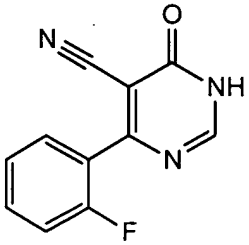
I-13



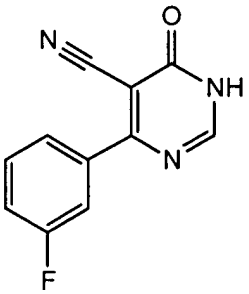
I-14



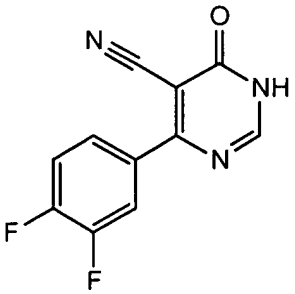
I-15



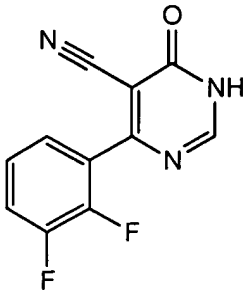
I-16



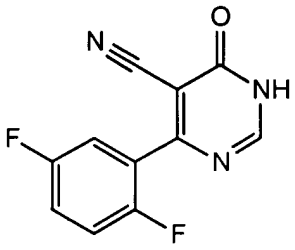
I-17



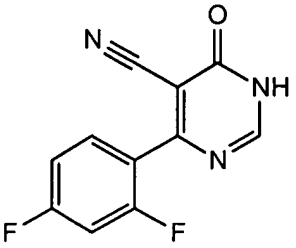
I-18



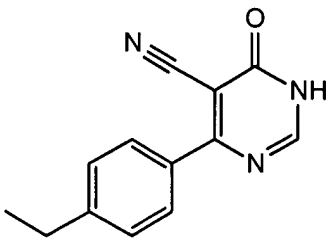
I-19



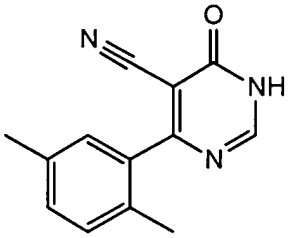
I-20



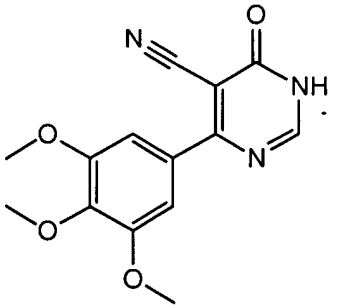
I-21



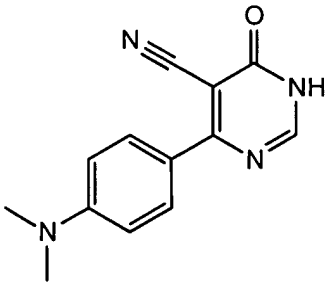
I-22



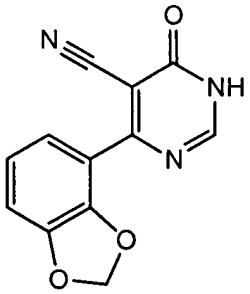
I-23



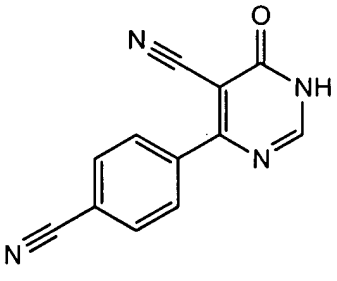
I-24



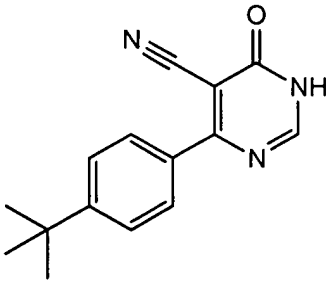
I-25



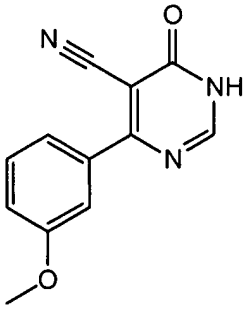
I-26



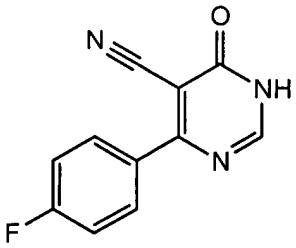
I-27



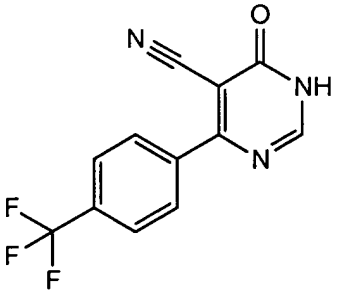
I-28



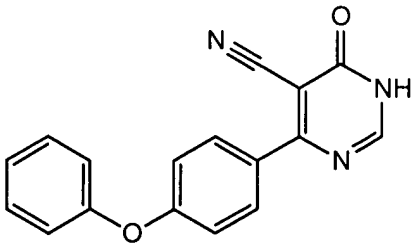
I-29



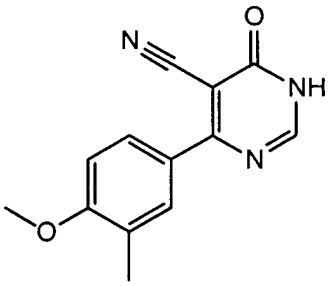
I-30



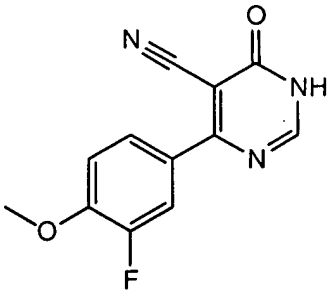
I-31



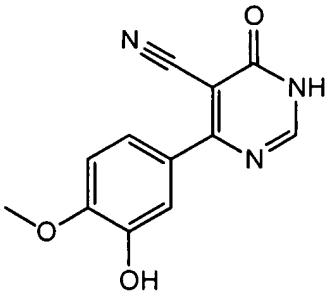
I-32



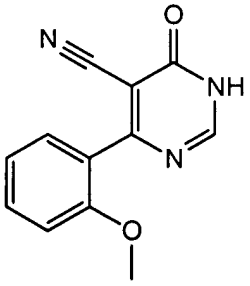
I-33



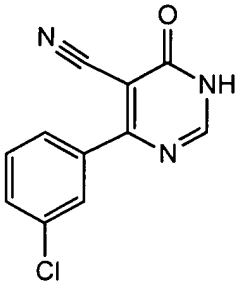
I-34



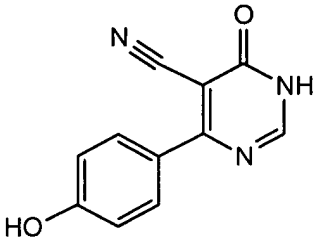
I-35



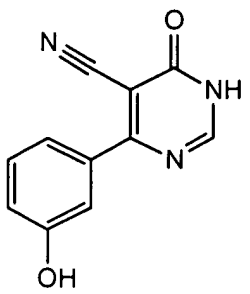
I-36



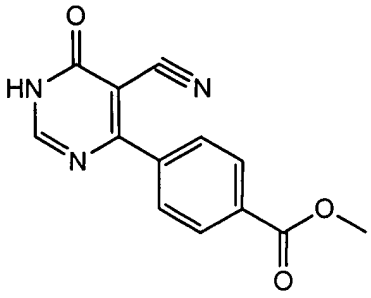
I-37



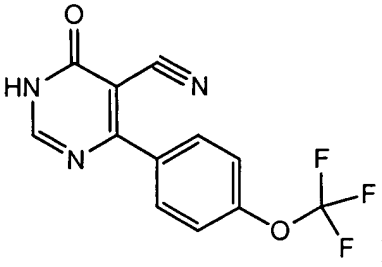
I-38



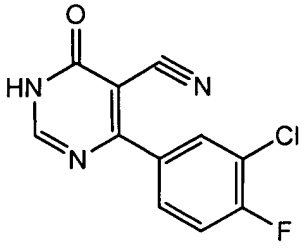
I-39



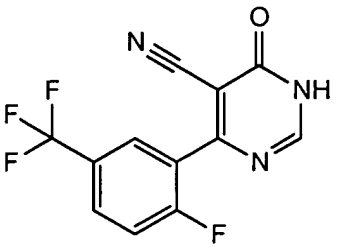
I-40



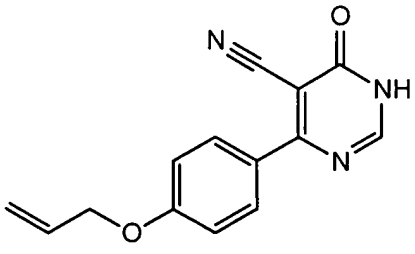
I-41



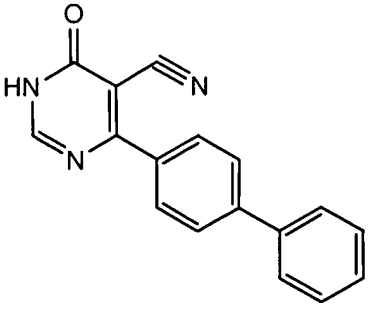
I-42



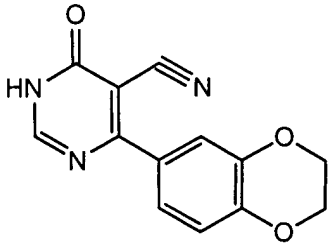
I-43



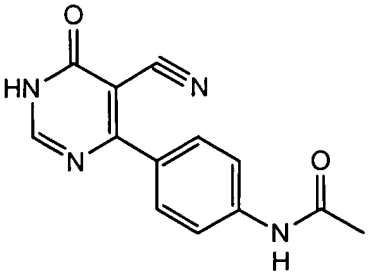
I-44



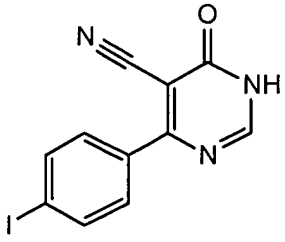
I-45



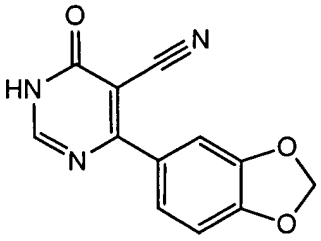
I-46



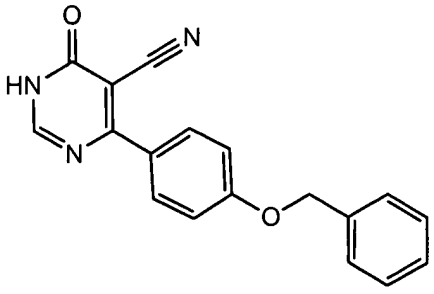
I-47



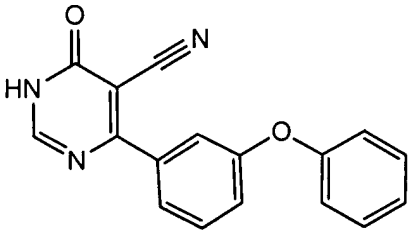
I-48



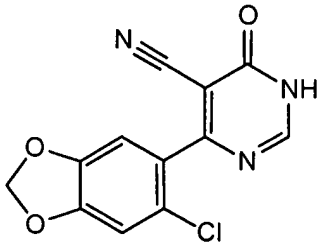
I-49



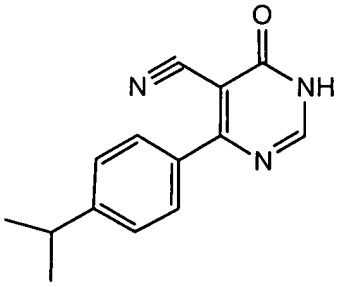
I-50



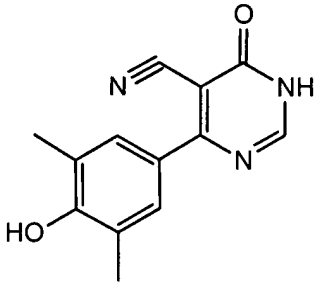
I-51



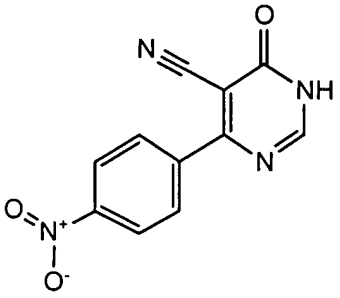
I-52



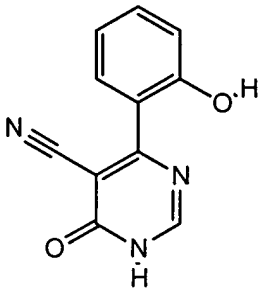
I-53



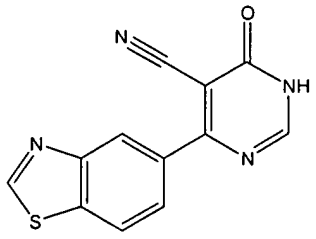
I-54



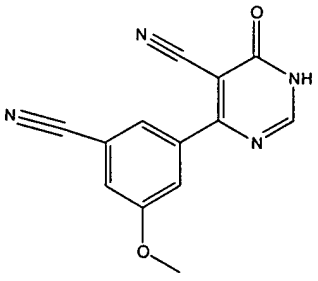
I-55



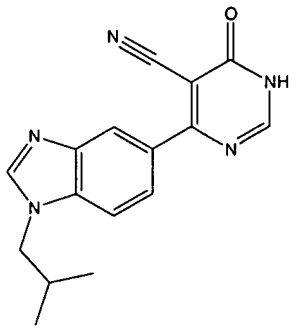
I-56



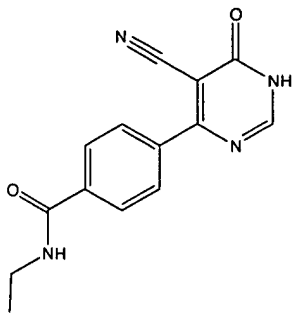
I-57



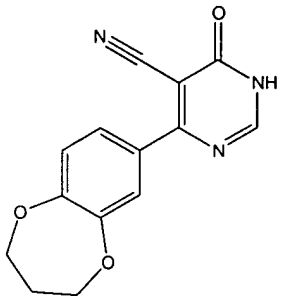
I-58



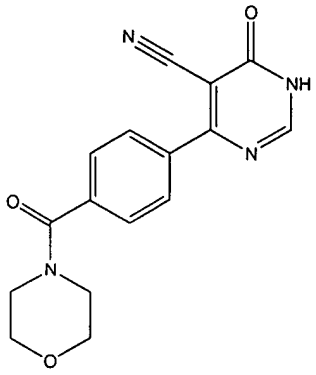
I-59



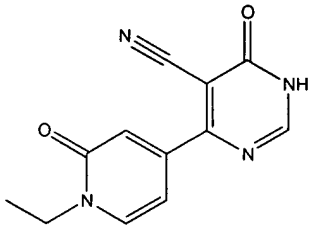
I-60



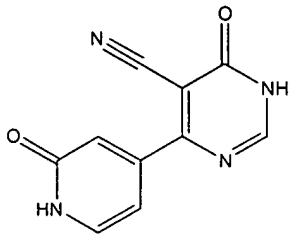
I-61



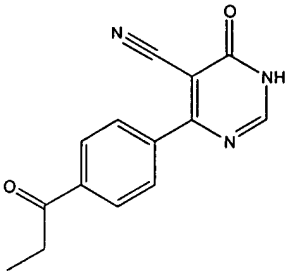
I-62



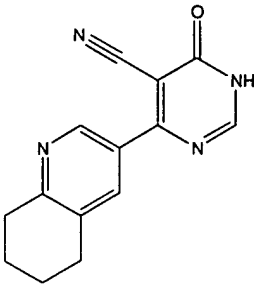
I-63



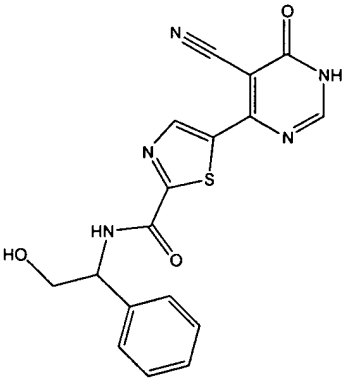
I-64



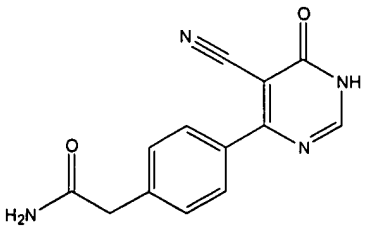
I-65



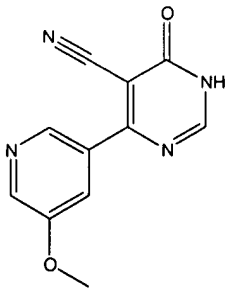
I-66



I-67



I-68



or **I-69**.

10. (Currently amended) A composition comprising a compound of claim 1, 7 or 9, and a pharmaceutically acceptable carrier, adjuvant, or vehicle.

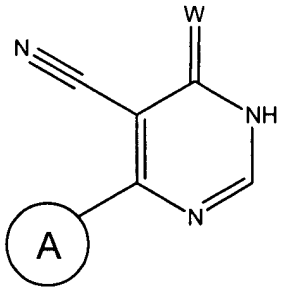
11. (Currently amended) The composition of claim ~~9~~ 10, additionally comprising a therapeutic agent selected from an anti-inflammatory agent, an immunomodulatory or immunosuppressive agent, a neurotrophic factor, an agent for treating cardiovascular disease, an agent for treating liver disease, an anti-viral agent, an agent for treating blood disorders, an agent for treating diabetes, or an agent for treating immunodeficiency disorders.

12. (Currently amended) A method of inhibiting GSK-3 activity in:

~~(a) a patient in need thereof; or~~

~~(b)~~ a biological sample;

which method comprises ~~administering to said patient, or~~ contacting said biological sample with a compound of formula **I**:



I

or a pharmaceutically acceptable salt thereof, wherein:

W is oxygen or sulfur;

ring A is a 5-6 membered aryl, heterocyclyl or heteroaryl ring having 0-4 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

wherein ring A is optionally substituted with 1-4 groups independently selected from halo, $-R^1$, $-OR^1$, $-SR^1$, $-NO_2$, -CN, $-N(R^1)_2$, $-NR^1C(O)R^1$, $-NR^1C(O)N(R^1)_2$, $-NR^1CO_2R^1$, $-NR^1NR^1C(O)R^1$, $-NR^1NR^1C(O)N(R^1)_2$, $-NR^1NR^1CO_2R^1$, $-C(O)C(O)R^1$, $-C(O)CH_2C(O)R^1$, $-CO_2R^1$, $-C(O)R^1$, $-C(O)N(R^1)_2$, $-OC(O)N(R^1)_2$, $-S(O)_2R^1$, $-SO_2N(R^1)_2$, $-S(O)R^1$, $-NR^1SO_2R^1$, $-NR^1SO_2N(R^1)_2$, $-C(=S)N(R^1)_2$, $-C(=NH)-N(R^1)_2$, =O, =S, $=NNHR^1$, $=NN(R^1)_2$, $=NNHC(O)R^1$, $=NNHCO_2(R^1)$, $=NNHSO_2(R^1)$, or $=NR^1$, wherein two independent occurrences of R^1, on the same substituent or different substituents, optionally taken together with the atom or atoms to which each R^1 group is bound, form a 3-8-membered cycloalkyl, heterocyclyl, aryl, or heteroaryl ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

each R^1 is independently selected from hydrogen, aliphatic, aryl, heteroaryl or heterocyclyl, wherein each member of R^1 except hydrogen is optionally substituted with halo, $-R^2$, $-OR^2$, $-SR^2$, $-NO_2$, -CN, $-N(R^2)_2$, $-NR^2C(O)R^2$, $-NR^2C(O)N(R^2)_2$, $-NR^2CO_2R^2$, $-NR^2NR^2C(O)R^2$, $-NR^2NR^2C(O)N(R^2)_2$, $-NR^2NR^2CO_2R^2$, $-C(O)C(O)R^2$, $-C(O)CH_2C(O)R^2$, $-CO_2R^2$, $-C(O)R^2$, $-C(O)N(R^2)_2$, $-OC(O)N(R^2)_2$, $-S(O)_2R^2$, $-SO_2N(R^2)_2$, $-S(O)R^2$, $-NR^2SO_2R^2$, $-NR^2SO_2N(R^2)_2$, $-C(=S)N(R^2)_2$, $-C(=NH)-N(R^2)_2$, =O, =S, $=NNHR^2$, $=NN(R^2)_2$, $=NNHC(O)R^2$, $=NNHCO_2(R^2)$, $=NNHSO_2(R^2)$, or $=NR^2$, wherein two independent occurrences of R^2, on the same substituent or different substituents, optionally taken together with the atom or atoms to which each R^2 group is bound, form a 3-8-membered cycloalkyl, heterocyclyl, aryl, or heteroaryl ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

each R^2 is independently selected from hydrogen, aliphatic, aryl, heteroaryl or heterocyclyl, wherein each member of $\underline{R^2}$ ~~R~~ except hydrogen is optionally substituted with halo, $-R^3$, $-OR^3$, $-SR^3$, $-NO_2$, -CN, $-N(R^3)_2$, $-NR^3C(O)R^3$, $-NR^3C(O)N(R^3)_2$, $-NR^3CO_2R^3$, $-NR^3NR^3C(O)R^3$, $-NR^3NR^3C(O)N(R^3)_2$, $-NR^3NR^3CO_2R^3$, $-C(O)C(O)R^3$, $-C(O)CH_2C(O)R^3$, $-CO_2R^3$, $-C(O)R^3$, $-C(O)N(R^3)_2$, $-OC(O)N(R^3)_2$, $-S(O)_2R^3$, $-SO_2N(R^3)_2$, $-S(O)R^3$, $-NR^3SO_2R^3$, $-NR^3SO_2N(R^3)_2$, $-C(=S)N(R^3)_2$, $-C(=NH)-N(R^3)_2$, =O, =S, $=NNHR^3$, $=NN(R^3)_2$, $=NNHC(O)R^3$, $=NNHCO_2(R^3)$, $=NNHSO_2(R^3)$, or $=NR^3$; and

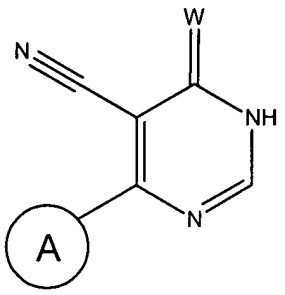
each R^3 is independently hydrogen or unsubstituted aliphatic; or

a pharmaceutical composition comprising said compound and a pharmaceutically acceptable carrier, adjuvant, or vehicle;

in an amount effective to inhibit GSK-3 activity.

13. to 15. (Canceled).

16. (Currently amended) A method of treating or lessening the severity of a disease or condition selected from a cardiac disorder, a neurodegenerative disorder, an autoimmune disorder, an inflammatory disorder, an immunologically mediated disorder, or a metabolic disorder, comprising administering to a patient a compound of formula **I**:



I

or a pharmaceutically acceptable salt thereof, wherein:

W is oxygen or sulfur;

ring A is a 5-6 membered aryl, heterocyclyl or heteroaryl ring having 0-4 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

wherein ring A is optionally substituted with 1-4 groups independently selected from halo, $-R^1$, $-OR^1$, $-SR^1$, $-NO_2$, $-CN$, $-N(R^1)_2$, $-NR^1C(O)R^1$, $-NR^1C(O)N(R^1)_2$, $-NR^1CO_2R^1$, $-NR^1NR^1C(O)R^1$, $-NR^1NR^1C(O)N(R^1)_2$, $-NR^1NR^1CO_2R^1$, $-C(O)C(O)R^1$, $-C(O)CH_2C(O)R^1$, $-CO_2R^1$, $-C(O)R^1$, $-C(O)N(R^1)_2$, $-OC(O)N(R^1)_2$, $-S(O)_2R^1$, $-SO_2N(R^1)_2$, $-S(O)R^1$, $-NR^1SO_2R^1$, $-NR^1SO_2N(R^1)_2$, $-C(=S)N(R^1)_2$, $-C(=NH)-N(R^1)_2$, =O, =S, $=NNHR^1$, $=NN(R^1)_2$, $=NNHC(O)R^1$, $=NNHCO_2(R^1)$, $=NNHSO_2(R^1)$, or $=NR^1$, wherein two independent occurrences of R^1, on the same substituent or different substituents, optionally taken together with the atom or atoms to which each R^1 group is bound, form a 3-8-membered cycloalkyl, heterocyclyl, aryl, or heteroaryl ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

each R^1 is independently selected from hydrogen, aliphatic, aryl, heteroaryl or heterocyclyl, wherein each member of R^1 except hydrogen is optionally substituted with halo, $-R^2$, $-OR^2$, $-SR^2$, $-NO_2$, $-CN$, $-N(R^2)_2$, $-NR^2C(O)R^2$, $-NR^2C(O)N(R^2)_2$, $-NR^2CO_2R^2$, $-NR^2NR^2C(O)R^2$, $-NR^2NR^2C(O)N(R^2)_2$, $-NR^2NR^2CO_2R^2$, $-C(O)C(O)R^2$, $-C(O)CH_2C(O)R^2$, $-CO_2R^2$, $-C(O)R^2$, $-C(O)N(R^2)_2$, $-OC(O)N(R^2)_2$, $-S(O)_2R^2$, $-SO_2N(R^2)_2$, $-S(O)R^2$, $-NR^2SO_2R^2$, $-NR^2SO_2N(R^2)_2$, $-C(=S)N(R^2)_2$, $-C(=NH)-N(R^2)_2$, =O, =S, $=NNHR^2$, $=NN(R^2)_2$, $=NNHC(O)R^2$, $=NNHCO_2(R^2)$, $=NNHSO_2(R^2)$, or $=NR^2$, wherein two independent occurrences of R^2, on the same substituent or different substituents, optionally taken together with the atom or atoms to

which each R^2 group is bound, form a 3-8-membered cycloalkyl, heterocyclyl, aryl, or heteroaryl ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

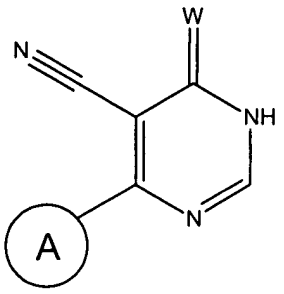
each R^2 is independently selected from hydrogen, aliphatic, aryl, heteroaryl or heterocyclyl, wherein each member of ~~R~~ $\underline{R^2}$ except hydrogen is optionally substituted with halo, $-R^3$, $-OR^3$, $-SR^3$, $-NO_2$, -CN, $-N(R^3)_2$, $-NR^3C(O)R^3$, $-NR^3C(O)N(R^3)_2$, $-NR^3CO_2R^3$, $-NR^3NR^3C(O)R^3$, $-NR^3NR^3C(O)N(R^3)_2$, $-NR^3NR^3CO_2R^3$, $-C(O)C(O)R^3$, $-C(O)CH_2C(O)R^3$, $-CO_2R^3$, $-C(O)R^3$, $-C(O)N(R^3)_2$, $-OC(O)N(R^3)_2$, $-S(O)_2R^3$, $-SO_2N(R^3)_2$, $-S(O)R^3$, $-NR^3SO_2R^3$, $-NR^3SO_2N(R^3)_2$, $-C(=S)N(R^3)_2$, $-C(=NH)-N(R^3)_2$, =O, =S, $=NNHR^3$, $=NN(R^3)_2$, $=NNHC(O)R^3$, $=NNHCO_2(R^3)$, $=NNHSO_2(R^3)$, or $=NR^3$; and

each R^3 is independently hydrogen or unsubstituted aliphatic; or

a pharmaceutical composition comprising said compound and a pharmaceutically acceptable carrier, adjuvant, or vehicle;

in an amount effective to treat or lessen the severity of said disease or condition.

17. (Currently amended) A method of treating or lessening the severity of a disease or condition selected from allergy, asthma, diabetes, Alzheimer's disease, Huntington's disease, Parkinson's disease, AIDS-associated dementia, amyotrophic lateral sclerosis (AML, Lou Gehrig's disease), multiple sclerosis (MS), schizophrenia, cardiomyocyte hypertrophy, reperfusion/ischemia, or baldness, comprising administering to a patient a compound of formula **I**:



I

or a pharmaceutically acceptable salt thereof, wherein:

W is oxygen or sulfur;

ring A is a 5-6 membered aryl, heterocyclyl or heteroaryl ring having 0-4 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

wherein ring A is optionally substituted with 1-4 groups independently selected from halo, $-R^1$, $-OR^1$, $-SR^1$, $-NO_2$, -CN, $-N(R^1)_2$, $-NR^1C(O)R^1$, $-NR^1C(O)N(R^1)_2$, $-NR^1CO_2R^1$, $-NR^1NR^1C(O)R^1$, $-NR^1NR^1C(O)N(R^1)_2$, $-NR^1NR^1CO_2R^1$, $-C(O)C(O)R^1$, $-C(O)CH_2C(O)R^1$, $-CO_2R^1$, $-C(O)R^1$, $-C(O)N(R^1)_2$, $-OC(O)N(R^1)_2$, $-S(O)_2R^1$, $-SO_2N(R^1)_2$, $-S(O)R^1$, $-NR^1SO_2R^1$, $-NR^1SO_2N(R^1)_2$, $-C(=S)N(R^1)_2$, $-C(=NH)-N(R^1)_2$, =O, =S, $=NNHR^1$, $=NN(R^1)_2$, $=NNHC(O)R^1$, $=NNHCO_2(R^1)$, $=NNHSO_2(R^1)$, or $=NR^1$, wherein two independent occurrences of R^1, on the same substituent or different substituents, optionally taken together with the atom or atoms to which each R^1 group is bound, form a 3-8-membered cycloalkyl, heterocyclyl, aryl, or heteroaryl ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

each R^1 is independently selected from hydrogen, aliphatic, aryl, heteroaryl or heterocyclyl, wherein each member of R^1 except hydrogen is optionally substituted with halo, $-R^2$, $-OR^2$, $-SR^2$, $-NO_2$, -CN, $-N(R^2)_2$, $-NR^2C(O)R^2$, $-NR^2C(O)N(R^2)_2$, $-NR^2CO_2R^2$, $-NR^2NR^2C(O)R^2$, $-NR^2NR^2C(O)N(R^2)_2$, $-NR^2NR^2CO_2R^2$, $-C(O)C(O)R^2$, $-C(O)CH_2C(O)R^2$, $-CO_2R^2$, $-C(O)R^2$, $-C(O)N(R^2)_2$, $-OC(O)N(R^2)_2$, $-S(O)_2R^2$, $-SO_2N(R^2)_2$, $-S(O)R^2$, $-NR^2SO_2R^2$, $-NR^2SO_2N(R^2)_2$, $-C(=S)N(R^2)_2$, $-C(=NH)-N(R^2)_2$, =O, =S, $=NNHR^2$, $=NN(R^2)_2$, $=NNHC(O)R^2$, $=NNHCO_2(R^2)$, $=NNHSO_2(R^2)$, or $=NR^2$, wherein two independent occurrences of R^2, on the same substituent or different substituents, optionally taken together with the atom or atoms to which each R^2 group is bound, form a 3-8-membered cycloalkyl, heterocyclyl, aryl, or heteroaryl ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

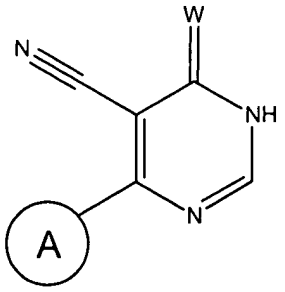
each R^2 is independently selected from hydrogen, aliphatic, aryl, heteroaryl or heterocyclyl, wherein each member of ~~R^1~~ $\underline{R^2}$ except hydrogen is optionally substituted with halo, $-R^3$, $-OR^3$, $-SR^3$, $-NO_2$, -CN, $-N(R^3)_2$, $-NR^3C(O)R^3$, $-NR^3C(O)N(R^3)_2$, $-NR^3CO_2R^3$, $-NR^3NR^3C(O)R^3$, $-NR^3NR^3C(O)N(R^3)_2$, $-NR^3NR^3CO_2R^3$, $-C(O)C(O)R^3$, $-C(O)CH_2C(O)R^3$, $-CO_2R^3$, $-C(O)R^3$, $-C(O)N(R^3)_2$, $-OC(O)N(R^3)_2$, $-S(O)_2R^3$, $-SO_2N(R^3)_2$, $-S(O)R^3$, $-NR^3SO_2R^3$, $-NR^3SO_2N(R^3)_2$, $-C(=S)N(R^3)_2$, $-C(=NH)-N(R^3)_2$, =O, =S, $=NNHR^3$, $=NN(R^3)_2$, $=NNHC(O)R^3$, $=NNHCO_2(R^3)$, $=NNHSO_2(R^3)$, or $=NR^3$; and

each R^3 is independently hydrogen or unsubstituted aliphatic; or

a pharmaceutical composition comprising said compound and a pharmaceutically acceptable carrier, adjuvant, or vehicle;

in an amount effective to treat or lessen the severity of said disease or condition.

18. (Currently amended) A method of treating or lessening the severity of stroke in a patient, comprising administering to said patient a compound of formula **I**:



I

or a pharmaceutically acceptable salt thereof, wherein:

W is oxygen or sulfur;

ring A is a 5-6 membered aryl, heterocyclyl or heteroaryl ring having 0-4 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

wherein ring A is optionally substituted with 1-4 groups independently selected from halo, $-R^1$, $-OR^1$, $-SR^1$, $-NO_2$, $-CN$, $-N(R^1)_2$, $-NR^1C(O)R^1$, $-NR^1C(O)N(R^1)_2$, $-NR^1CO_2R^1$, $-NR^1NR^1C(O)R^1$, $-NR^1NR^1C(O)N(R^1)_2$, $-NR^1NR^1CO_2R^1$, $-C(O)C(O)R^1$, $-C(O)CH_2C(O)R^1$, $-CO_2R^1$, $-C(O)R^1$, $-C(O)N(R^1)_2$, $-OC(O)N(R^1)_2$, $-S(O)_2R^1$, $-SO_2N(R^1)_2$, $-S(O)R^1$, $-NR^1SO_2R^1$, $-NR^1SO_2N(R^1)_2$, $-C(=S)N(R^1)_2$, $-C(=NH)-N(R^1)_2$, =O, =S, $=NNHR^1$, $=NN(R^1)_2$, $=NNHC(O)R^1$, $=NNHCO_2(R^1)$, $=NNHSO_2(R^1)$, or $=NR^1$, wherein two independent occurrences of R^1, on the same substituent or different substituents, optionally taken together with the atom or atoms to which each R^1 group is bound, form a 3-8-membered cycloalkyl, heterocyclyl, aryl, or heteroaryl ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

each R^1 is independently selected from hydrogen, aliphatic, aryl, heteroaryl or heterocyclyl, wherein each member of R^1 except hydrogen is optionally substituted with halo, $-R^2$, $-OR^2$, $-SR^2$, $-NO_2$, $-CN$, $-N(R^2)_2$, $-NR^2C(O)R^2$, $-NR^2C(O)N(R^2)_2$, $-NR^2CO_2R^2$, $-NR^2NR^2C(O)R^2$, $-NR^2NR^2C(O)N(R^2)_2$, $-NR^2NR^2CO_2R^2$, $-C(O)C(O)R^2$, $-C(O)CH_2C(O)R^2$, $-CO_2R^2$, $-C(O)R^2$, $-C(O)N(R^2)_2$, $-OC(O)N(R^2)_2$, $-S(O)_2R^2$, $-SO_2N(R^2)_2$, $-S(O)R^2$, $-NR^2SO_2R^2$, $-NR^2SO_2N(R^2)_2$, $-C(=S)N(R^2)_2$, $-C(=NH)-N(R^2)_2$, =O, =S, $=NNHR^2$, $=NN(R^2)_2$, $=NNHC(O)R^2$, $=NNHCO_2(R^2)$, $=NNHSO_2(R^2)$, or $=NR^2$, wherein two independent occurrences of R^2, on the same substituent or different substituents, optionally taken together with the atom or atoms to which each R^2 group is bound, form a 3-8-membered cycloalkyl, heterocyclyl, aryl, or heteroaryl ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

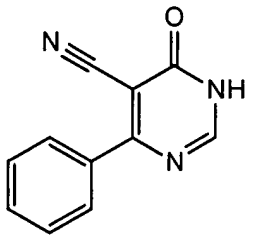
each R^2 is independently selected from hydrogen, aliphatic, aryl, heteroaryl or heterocyclyl, wherein each member of ~~R~~^{1} R^2 except hydrogen is optionally substituted with halo, $-R^3$, $-OR^3$, $-SR^3$, $-NO_2$, -CN, $-N(R^3)_2$, $-NR^3C(O)R^3$, $-NR^3C(O)N(R^3)_2$, $-NR^3CO_2R^3$, $-NR^3NR^3C(O)R^3$, $-NR^3NR^3C(O)N(R^3)_2$, $-NR^3NR^3CO_2R^3$, $-C(O)C(O)R^3$, $-C(O)CH_2C(O)R^3$, $-CO_2R^3$, $-C(O)R^3$, $-C(O)N(R^3)_2$, $-OC(O)N(R^3)_2$, $-S(O)_2R^3$, $-SO_2N(R^3)_2$, $-S(O)R^3$, $-NR^3SO_2R^3$, $-NR^3SO_2N(R^3)_2$, $-C(=S)N(R^3)_2$, $-C(=NH)-N(R^3)_2$, =O, =S, $=NNHR^3$, $=NN(R^3)_2$, $=NNHC(O)R^3$, $=NNHCO_2(R^3)$, $=NNHSO_2(R^3)$, or $=NR^3$; and

each R^3 is independently hydrogen or unsubstituted aliphatic; or

a pharmaceutical composition comprising said compound and a pharmaceutically acceptable carrier, adjuvant, or vehicle;

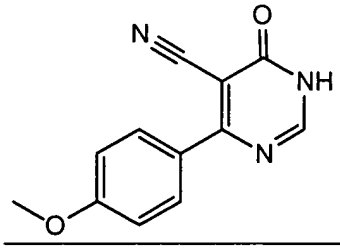
in an amount effective to treat or lessen the severity of stroke in said patient.

19. (Currently amended) The method according to any one of claims ~~12-18~~ 16-18, wherein said method comprises administering to said patient ~~a compound of claim 8 or~~ compound **I-1**:

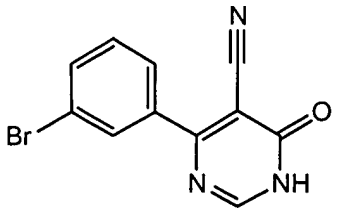


I-1

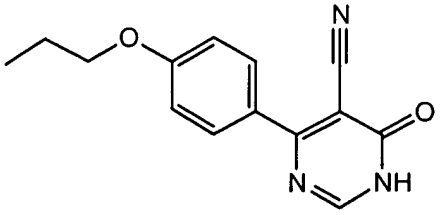
or a compound selected from:



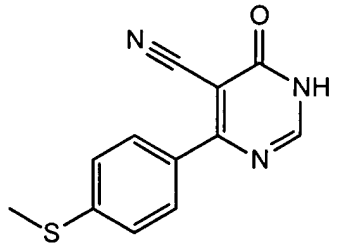
I-2



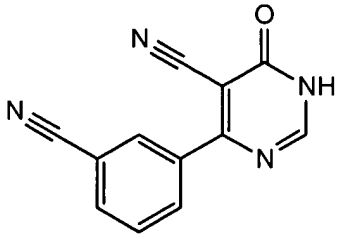
I-3



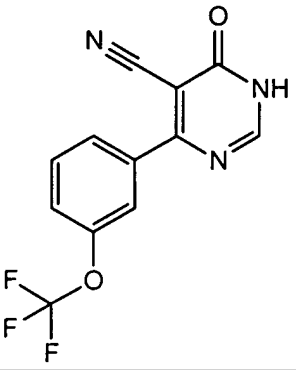
I-4



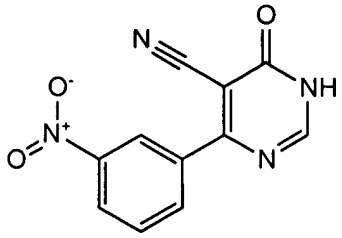
I-5



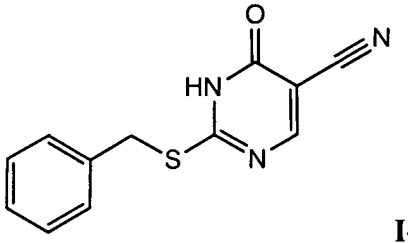
I-6



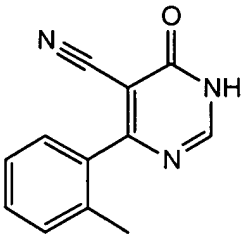
I-7



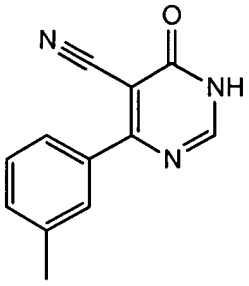
I-8



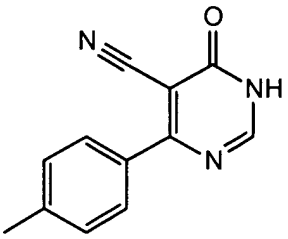
I-9



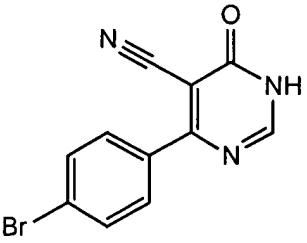
I-10



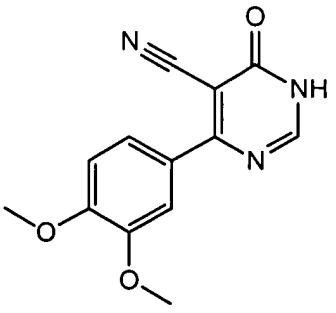
I-11



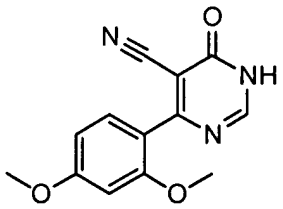
I-12



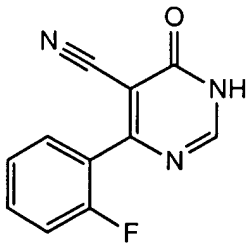
I-13



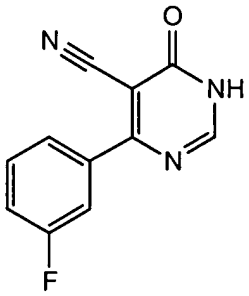
I-14



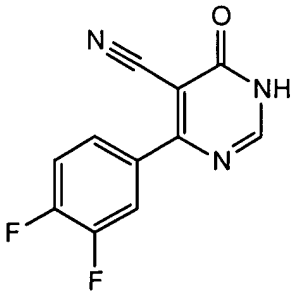
I-15



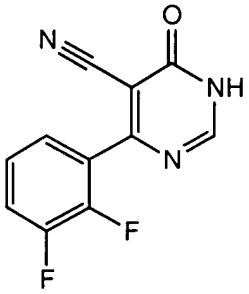
I-16



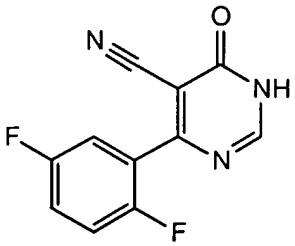
I-17



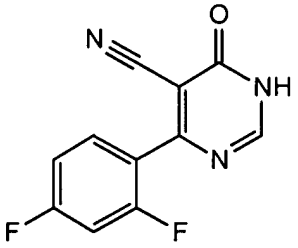
I-18



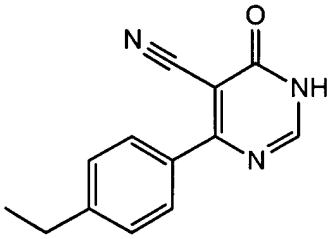
I-19



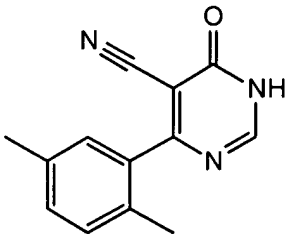
I-20



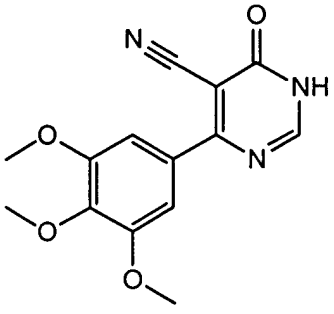
I-21



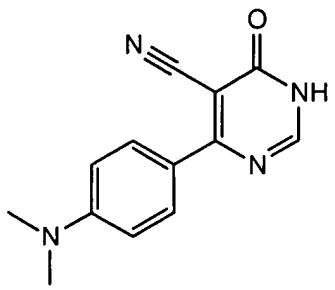
I-22



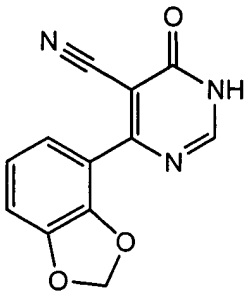
I-23



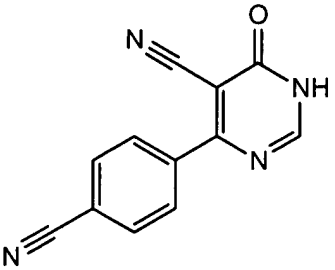
I-24



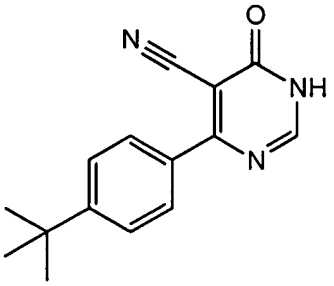
I-25



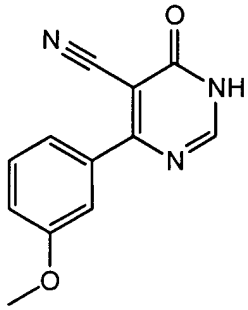
I-26



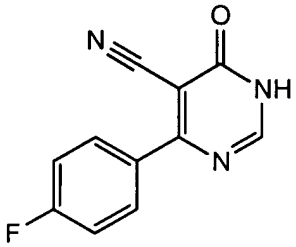
I-27



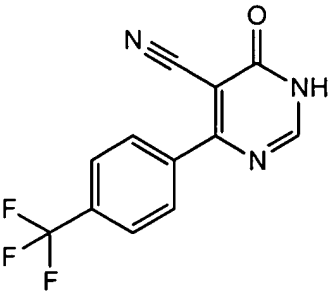
I-28



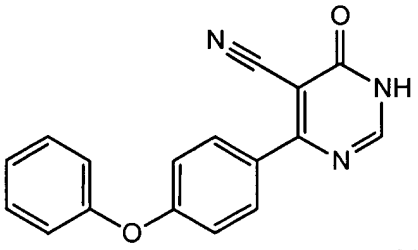
I-29



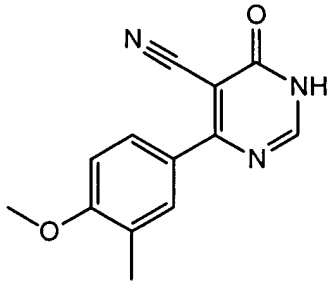
I-30



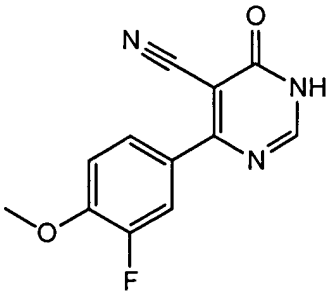
I-31



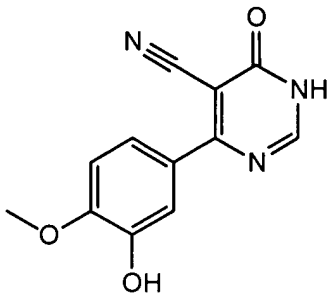
I-32



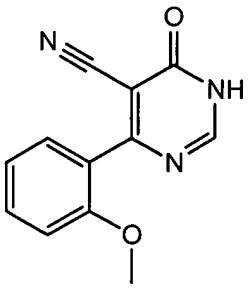
I-33



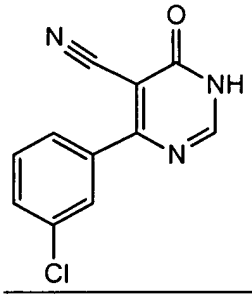
I-34



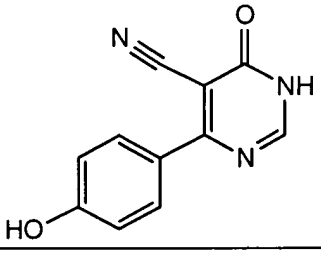
I-35



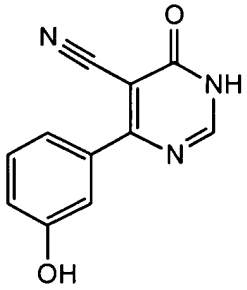
I-36



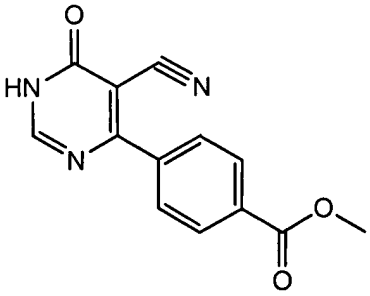
I-37



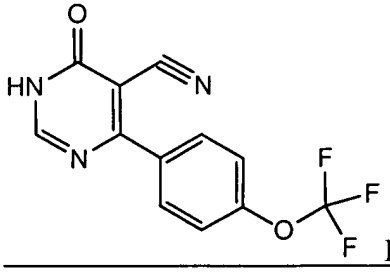
I-38



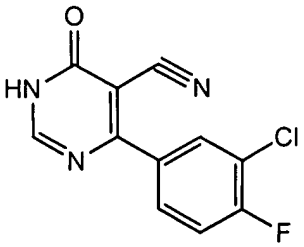
I-39



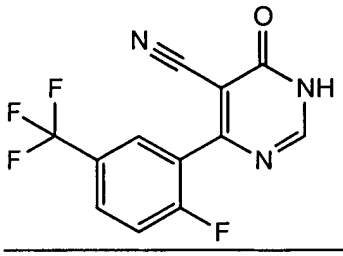
I-40



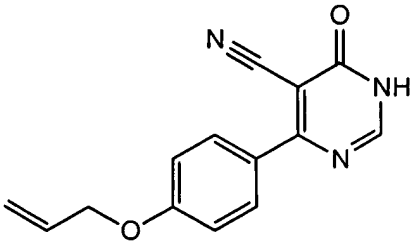
I-41



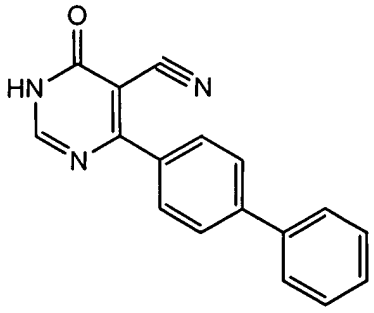
I-42



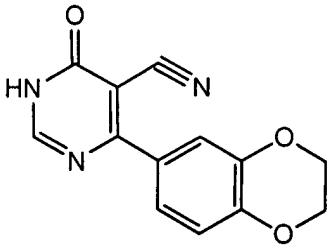
I-43



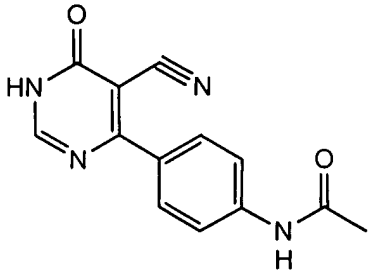
I-44



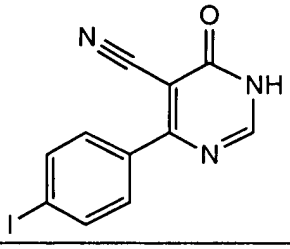
I-45



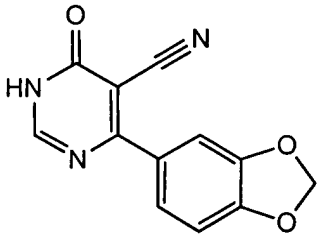
I-46



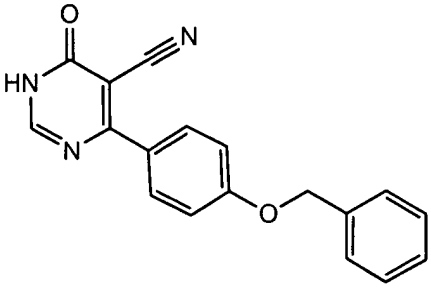
I-47



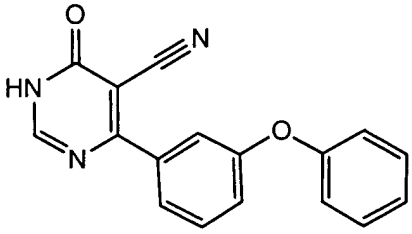
I-48



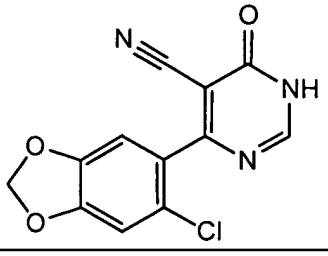
I-49



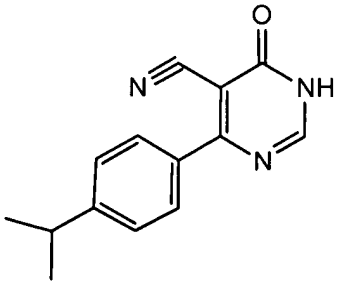
I-50



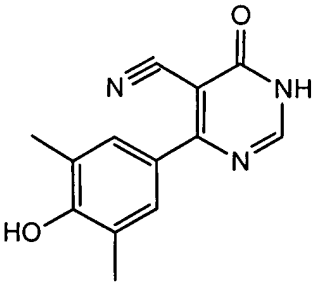
I-51



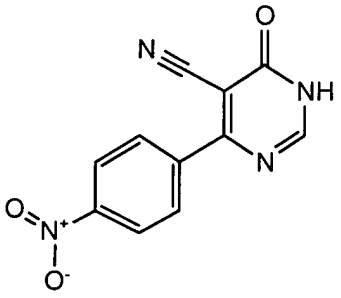
I-52



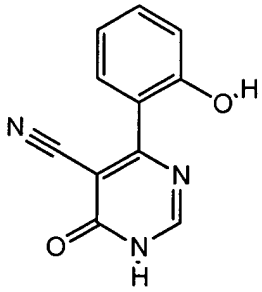
I-53



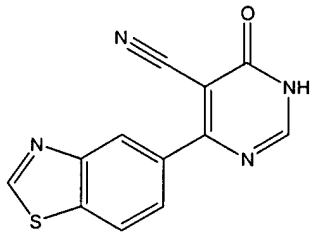
I-54



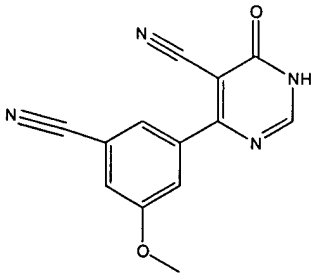
I-55



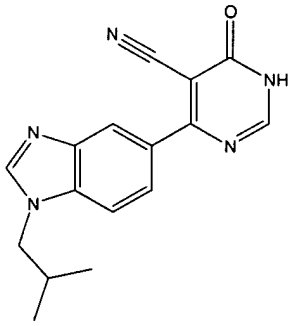
I-56



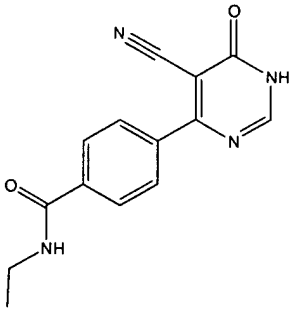
I-57



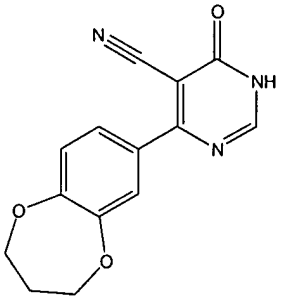
I-58



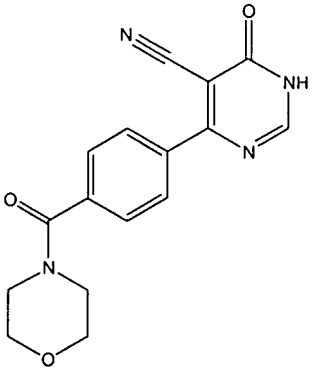
I-59



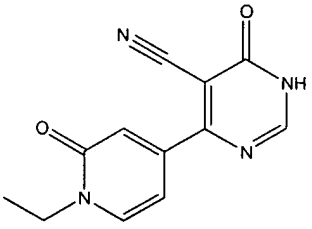
I-60



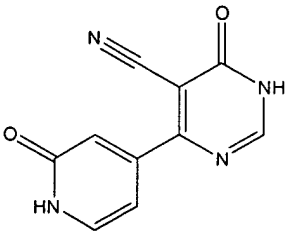
I-61



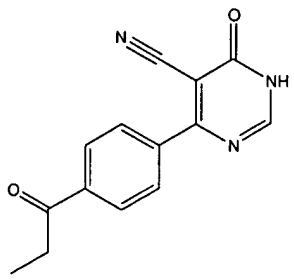
I-62



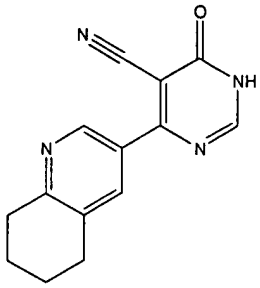
I-63



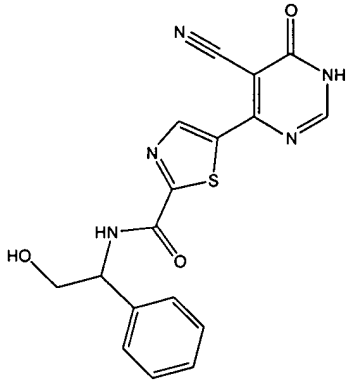
I-64



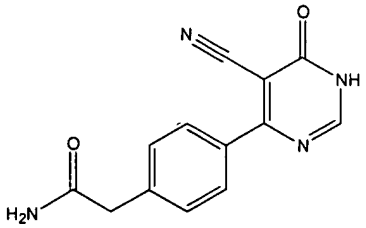
I-65



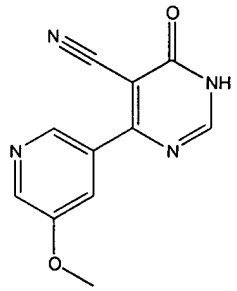
I-66



I-67



I-68



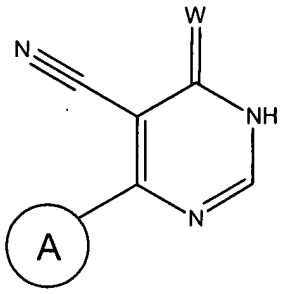
or I-69.

20. (Currently amended) The method according to any one of claims ~~12-18~~ 16-18, comprising the additional step of administering to said patient an additional therapeutic agent selected from an anti-inflammatory agent, an immunomodulatory or immunosuppressive agent, a neurotrophic factor, an agent for treating cardiovascular disease, an agent for treating liver disease, an anti-viral agent, an agent for treating blood disorders, an agent for treating diabetes, or an agent for treating immunodeficiency disorders, wherein:

said additional therapeutic agent is appropriate for the disease being treated; and

said additional therapeutic agent is administered together with said composition as a single dosage form or separately from said composition as part of a multiple dosage form.

21. (New) A compound of formula **I**:



I

or a pharmaceutically acceptable salt thereof, wherein:

W is oxygen or sulfur;

ring A is a 5-6 membered heterocyclyl or heteroaryl ring having 1-4 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

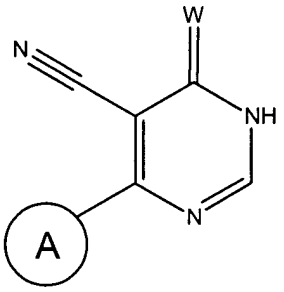
wherein ring A is optionally substituted with 1-4 groups independently selected from halo, $-R^1$, $-OR^1$, $-SR^1$, $-NO_2$, -CN, $-N(R^1)_2$, $-NR^1C(O)R^1$, $-NR^1C(O)N(R^1)_2$, $-NR^1CO_2R^1$, $-NR^1NR^1C(O)R^1$, $-NR^1NR^1C(O)N(R^1)_2$, $-NR^1NR^1CO_2R^1$, $-C(O)C(O)R^1$, $-C(O)CH_2C(O)R^1$, $-CO_2R^1$, $-C(O)R^1$, $-C(O)N(R^1)_2$, $-OC(O)N(R^1)_2$, $-S(O)_2R^1$, $-SO_2N(R^1)_2$, $-S(O)R^1$, $-NR^1SO_2R^1$, $-NR^1SO_2N(R^1)_2$, $-C(=S)N(R^1)_2$, $-C(=NH)-N(R^1)_2$, =O, =S, $=NNHR^1$, $=NN(R^1)_2$, $=NNHC(O)R^1$, $=NNHCO_2(R^1)$, $=NNHSO_2(R^1)$, or $=NR^1$, wherein two independent occurrences of R^1, on the same substituent or different substituents, optionally taken together with the atom or atoms to which each R^1 group is bound, form a 3-8 membered cycloalkyl, heterocyclyl, aryl, or heteroaryl ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

each R^1 is independently selected from hydrogen, aliphatic, aryl, heteroaryl or heterocyclyl, wherein each member of R^1 except hydrogen is optionally substituted with halo, $-R^2$, $-OR^2$, $-SR^2$, $-NO_2$, -CN, $-N(R^2)_2$, $-NR^2C(O)R^2$, $-NR^2C(O)N(R^2)_2$, $-NR^2CO_2R^2$, $-NR^2NR^2C(O)R^2$, $-NR^2NR^2C(O)N(R^2)_2$, $-NR^2NR^2CO_2R^2$, $-C(O)C(O)R^2$, $-C(O)CH_2C(O)R^2$, $-CO_2R^2$, $-C(O)R^2$, $-C(O)N(R^2)_2$, $-OC(O)N(R^2)_2$, $-S(O)_2R^2$, $-SO_2N(R^2)_2$, $-S(O)R^2$, $-NR^2SO_2R^2$, $-NR^2SO_2N(R^2)_2$, $-C(=S)N(R^2)_2$, $-C(=NH)-N(R^2)_2$, =O, =S, $=NNHR^2$, $=NN(R^2)_2$, $=NNHC(O)R^2$, $=NNHCO_2(R^2)$, $=NNHSO_2(R^2)$, or $=NR^2$, wherein two independent occurrences of R^2, on the same substituent or different substituents, optionally taken together with the atom or atoms to which each R^2 group is bound, form a 3-8-membered cycloalkyl, heterocyclyl, aryl, or heteroaryl ring having 0-3 heteroatoms independently selected from nitrogen, oxygen, or sulfur;

each R^2 is independently selected from hydrogen, aliphatic, aryl, heteroaryl or heterocyclyl, wherein each member of R^2 except hydrogen is optionally substituted with halo, $-R^3$, $-OR^3$, $-SR^3$, $-NO_2$, -CN, $-N(R^3)_2$, $-NR^3C(O)R^3$, $-NR^3C(O)N(R^3)_2$, $-NR^3CO_2R^3$, $-NR^3NR^3C(O)R^3$, $-NR^3NR^3C(O)N(R^3)_2$, $-NR^3NR^3CO_2R^3$, $-C(O)C(O)R^3$, $-C(O)CH_2C(O)R^3$, $-CO_2R^3$, $-C(O)R^3$, $-C(O)N(R^3)_2$, $-OC(O)N(R^3)_2$, $-S(O)_2R^3$, $-SO_2N(R^3)_2$, $-S(O)R^3$, $-NR^3SO_2R^3$, $-NR^3SO_2N(R^3)_2$, $-C(=S)N(R^3)_2$, $-C(=NH)-N(R^3)_2$, =O, =S, $=NNHR^3$, $=NN(R^3)_2$, $=NNHC(O)R^3$, $=NNHCO_2(R^3)$, $=NNHSO_2(R^3)$, or $=NR^3$; and

each R^3 is independently hydrogen or unsubstituted aliphatic.

22. (New) A compound of formula **I**:

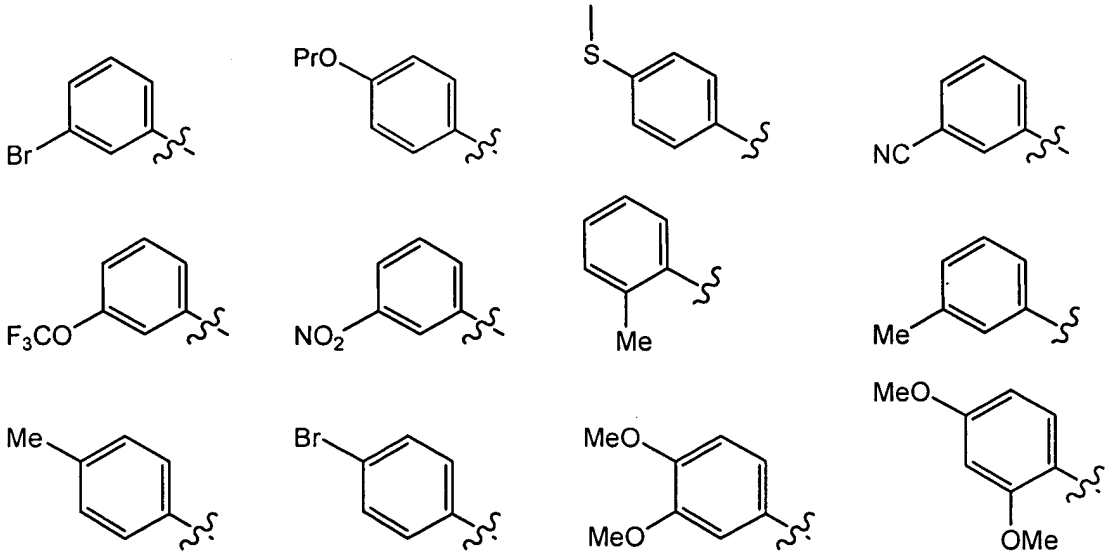


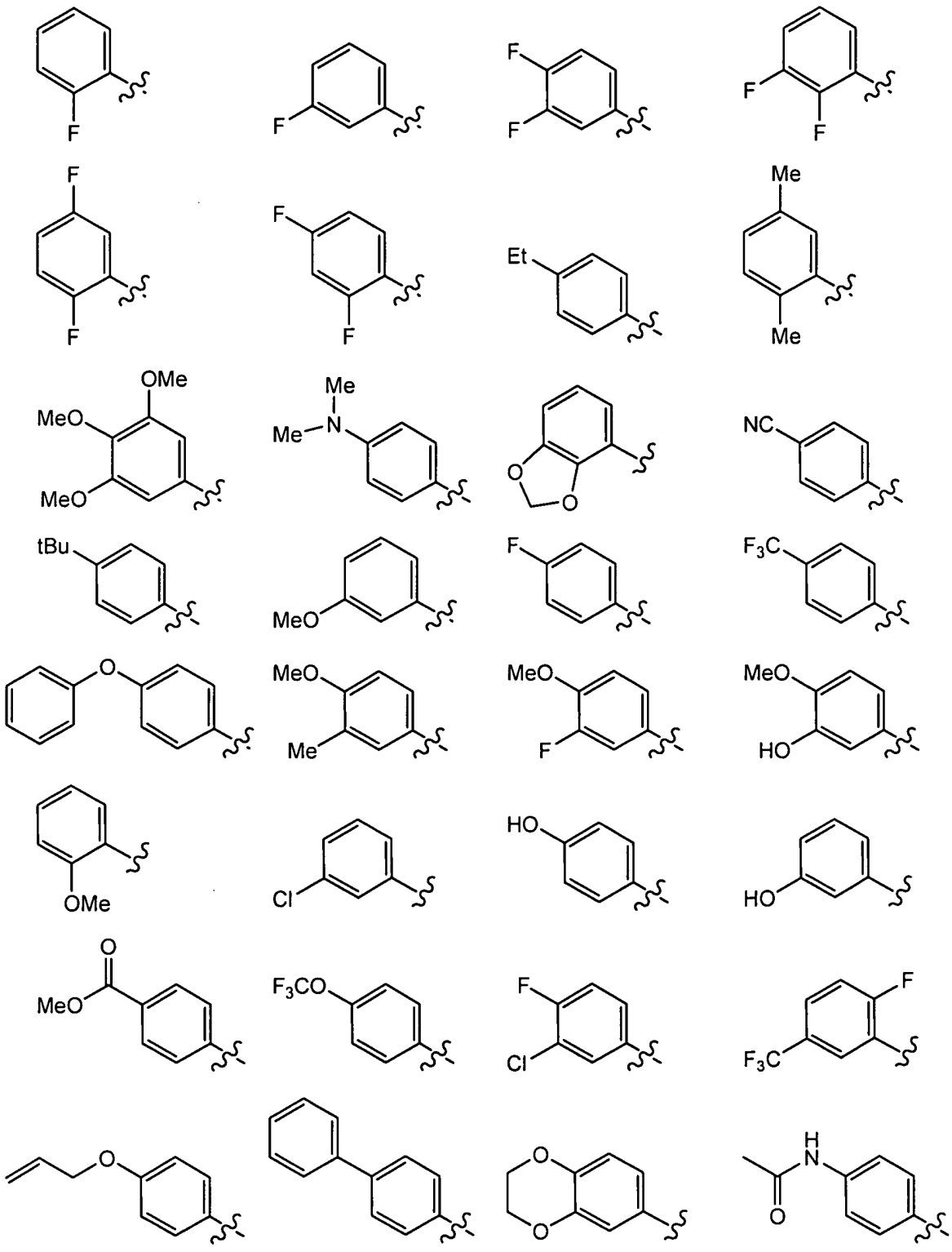
I

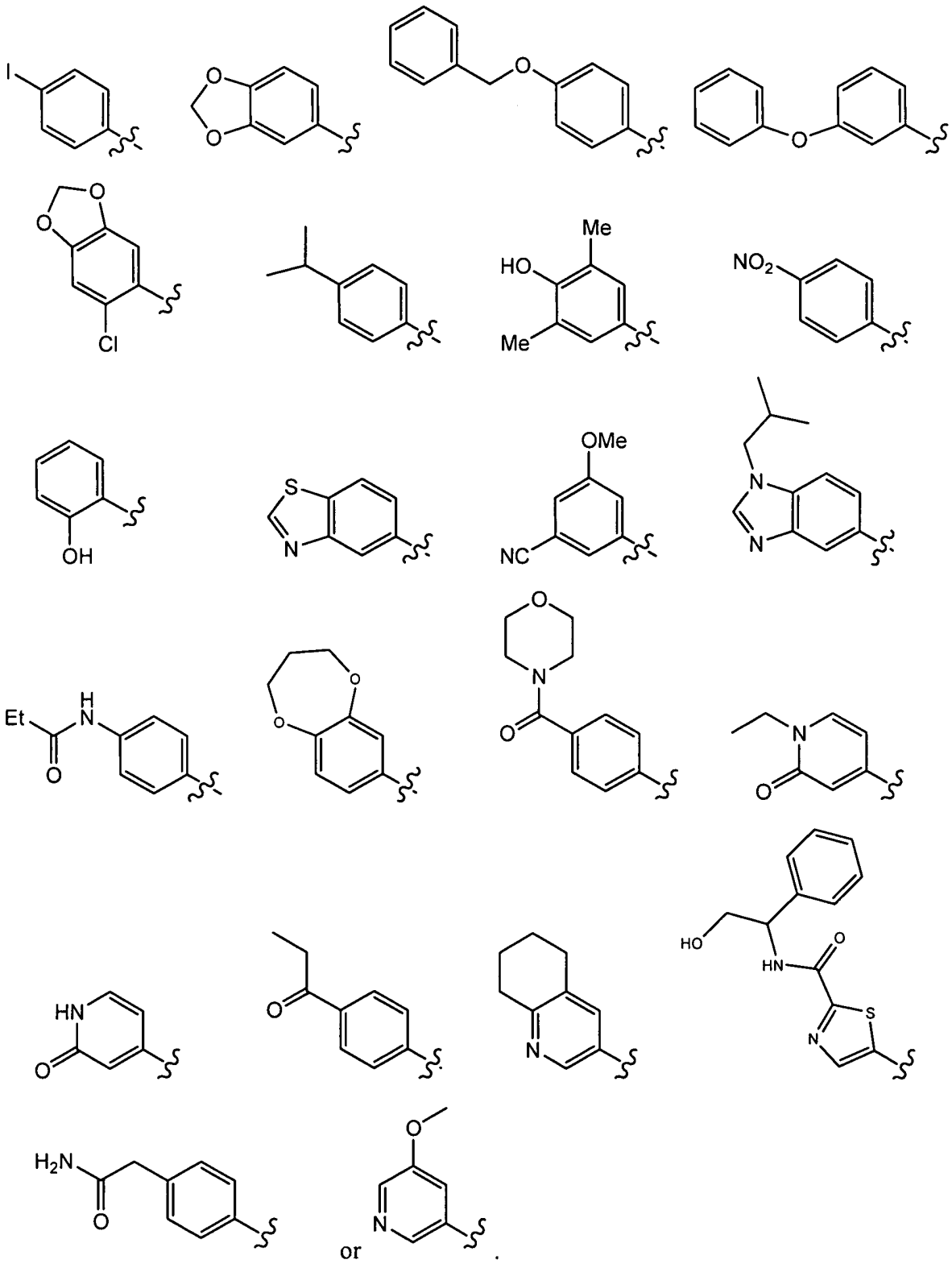
or a pharmaceutically acceptable salt thereof, wherein:

W is oxygen or sulfur; and

ring A is selected from:




F
F
F
F
F
F
F
F
F
F
Et
Me
Me
OMe
MeO
MeO
Me
Me
N
O
O
NC
tBu
MeO
F
F3C
O
MeO
Me
MeO
F
MeO
HO
OMe
Cl
HO
HO
O
MeO
F3CO
F
Cl
F
F3C
O
O
O
H
N
O


I
O
O
O
O
O
O
Cl
Me
HO
Me
NO2
OH
S
N
OMe
NC
N
N
O
Et
H
N
O
O
O
N
O
N
O
HN
O
O
HO
HN
O
S
N
N
H2N
O
O
N
or